

ENVIRONMENTAL PROTECTION PLAN

FOR

CONTRACT # _____

PROJECT NUMBER # _____

As the representative of, _____, I, _____ certify
Company Name Name

that the information provided is true and I agree to fully comply with this Environmental Protection Plan. Any discrepancies that may arise between the contract specifications and this plan will immediately be brought to the project's Corps of Engineers Resident Engineer and the Environmental Office.

Date

Signature, Title

Plan should be submitted to the appropriate Corps of Engineers Office who will forward to Fort Bragg, Directorate of Public Works, Environmental Compliance Branch Chief.

TABLE OF CONTENTS

PART 1-GENERAL

1.1	Introduction.....	3
1.2	Quality Control.....	3
1.3	Knowledge of Environmental Requirements.....	3
1.4	Contractor Compliance.....	3

PART 2 – PROTECTION OF ENVIRONMENTAL RESOURCES

2.1	Air Quality Program.....	7
2.2	Hazardous Waste/Materials.....	8
2.3	Solid Waste Program.....	10
2.4	Asbestos and Lead Based Paint Program.....	14
2.5	Tanks/IRP/OWS Program.....	16
2.6	Pest Control Management Program.....	20
2.7	Water Program.....	20
2.8	Natural Resources.....	21
2.9	Land Resources.....	22
2.10	Cultural Resources Program.....	24
2.11	Water Management Program.....	25

PART 3 - EXECUTION

3.1	Submittals.....	27
3.2.	Environmental Monitoring.....	27
3.3	Implementation.....	27
3.4	Notification.....	27
3.5	Post-Construction Cleanup.....	28
3.6	Restoration of Damaged Landscape.....	28
3.7	Maintenance of Pollution Control Facilities.....	28
3.8	Training of Contractor Personnel in Pollution Control.....	29

ATTACHMENTS

Attachment 1: Environmental Points of Contact

Attachment 2: Tree Replacement/Planting Values Policy

Attachment 3: Stormwater Inspections for General Permit NCG01000 – Land Disturbing Activities

PART 1-GENERAL

1.1 INTRODUCTION

This Environmental Protection Plan (EPP) specifies Contractor work practices to provide environmental pollution prevention and minimize damage to the environment as the result of construction, demolition, and renovation operations under this contract and for those measures set forth in other technical provisions of these specifications. Environmental pollution and damage to the environment is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare, unfavorably impacts ecosystems, or degrades the utility of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental pollution and impacts requires consideration of the potential effects of an action upon air, water, and land resources, and includes management of visual aesthetics, natural and cultural resources, noise levels, solid waste, dust, hazardous waste, toxic waste, and radioactive materials, as well as other pollutants. This EPP is prepared in accordance with Army Regulation 200-1, Environmental Protection and Enhancement and with current federal, state and local laws and regulations concerning environmental pollution.

Adherence to the EPP is mandatory and it is required that all site workers read the plan prior to working on site. The Contractor is required to keep the EPP on-site at all times during construction, demolition, and renovation operations under this contract.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall immediately inform the Fort Bragg Directorate of Public Works-Environmental Compliance Branch (DPW-ECB) of any environmental problem(s).

1.3. KNOWLEDGE OF ENVIRONMENTAL REQUIREMENTS

The Contractor is responsible for being knowledgeable of, and complying with, all applicable federal, state, and local laws, regulations, permit requirements, and Army policy. Whenever there is a conflict among federal, state, and local laws, regulations, and permit requirements, the more restrictive provision shall apply.

1.4. CONTRACTOR COMPLIANCE

A. Permits

The Contractor shall comply with all requirements under the terms and conditions set forth in any and all permits issued for work under this project (or related projects) by any local, state or federal agency. (e.g., Fort Bragg Landfill Usage Permit, North Carolina Department of Environment and Natural Resources (NCDENR), Erosion and Sedimentation Control Permit, Health Hazards Control Unit (HHCUC) Asbestos Abatement Permit, 401 Water Quality Permit,

NCDENR Air Quality Permit, NCDENR Sanitary Sewer Permit, U.S. Environmental Protection Agency Permit, etc.). Any changes to permits must be justified. Contractor must notify the Corps of Engineers (COE) who will coordinate with DPW-ECB for revisions.

B. Environmental Management System (EMS) Awareness

Fort Bragg is charged with the mission to mobilize and deploy America's contingency forces. To support this critical mission, all military, civilian, and contracted personnel on Fort Bragg must comply with applicable laws and regulations while performing their duties in a manner that prevents pollution, conserves natural & cultural resources, and protects the environment. The Contractor shall perform work under this contract consistent with Fort Bragg's environmental policy identified below.

The Right Way...

Obey environmental laws by being aware of Federal, State, and Fort Bragg environmental regulations.

The Green Way...

Practice pollution prevention by choosing actions to safeguard health, the environment, financial, and natural resources.

All the Way!

Keep improving by being aware of the long-term impacts of your actions and choosing to minimize them.

The Contractor shall perform work in a manner that conforms to all appropriate Environmental Management Programs and Operational Controls identified by Fort Bragg's EMS, including pollution prevention, waste reduction, energy use, and natural resource protection. The Contractor shall provide monitoring and measurement information as necessary for the organization to address environmental performance relative to the environmental, energy, and transportation management goals. In addition, the Contractor shall advise their employees of their roles and responsibilities identified by the EMS and how these requirements affect their work performed under this contract.

While adhering to the contract limits, the responsibilities of all contractor personnel include, but are not limited to:

- (1) Recycling all eligible material, including glass, paper (including magazines), plastic, aluminum, and cardboard to the maximum extent practicable;
- (2) Reducing the amount of hazardous material and/or solvent used by purchasing fewer hazardous materials and by increasing the use of products with recycled content;

- (3) Reducing the amount of solid waste from construction and demolition debris, and scrap metal sent to Fort Bragg's landfill by reducing, reusing, and recycling; and
- (4) Conserving energy and water usage by turning off lights and equipment when not in use and using only the necessary amount of water needed to complete the required tasks. Continuous conservation of our natural resources is a must.
- (5) All contracted employees must be aware of all the environmental impacts associated with construction activities.

In the event of any environmental nonconformance or noncompliance associated with the contracted services, the contractor shall take corrective and/or preventative actions. In the event of any noncompliance with any federal, state, or local environmental law, regulation or requirement, the Contractor shall immediately respond by taking all appropriate corrective action and the COE shall notify the DPW-ECB.

The Contractor shall provide a statement on how Fort Bragg's environmental policy will be supported during this contract.

C. Contacts with Regulators and Fines

The Contractor shall inform the COE Environmental Office, who will coordinate with DPW-ECB, of any contact with regulators, including copies of correspondence, site visits and inspections. If a permit requires mitigation, that mitigation shall be coordinated with the COE Environmental Office. The Contractor shall be liable for any costs, assessments, fines, legal fees, etc., that the Army may incur resulting from actions or responsibilities of the Contractor. Any and all new permits will be coordinated with the COE Environmental Office, who will in-turn, contact DPW-ECB. At no time will a Contractor send a permit application directly to any agency. **A list of Environmental Points of Contacts is located in the EPP as Attachment 1 (DOC to include the applicable FAR reference for fines and legal fees).**

D. Traffic and Work Zone Safety

The Contractor's attention is directed to the fact that many primary and secondary roads and bridges are posted with weight limits. The Contractor will not be allowed to exceed the posted weight limits in transporting equipment or debris. The Contractor should make a thorough examination of all maps and haul routes for this project.

The Contractor shall utilize complete and proper traffic controls and traffic control devices during all phases of the project, if applicable. All traffic control and traffic control devices shall be functional and in place prior to the commencement of the project. Signs shall be removed during periods of inactivity. The Contractor is required to leave the project in a manner that will be safe to the traveling public and which will not impede motorists.

The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation. The Contractor shall provide all safeguards, safety devices, and personal protective equipment, and any necessary actions to protect the life and health of employees on the job, the safety of the public, and to protect property in connection with the performance of the work covered by the contract.

E. Subcontractors

Assurance that subcontractors comply with the EPP will be the responsibility of the prime Contractor.

F. Contractor Information

Company Name: _____

The following person will be the primary contact for the COE Environmental Office.

_____ Name	_____ Telephone Number
---------------	---------------------------

Please provide a short description of the project scope.

When completing this EPP, please answer all questions completely.

PART 2 – PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. The

Contractor shall comply with the following requirements of each environmental program identified.

2.1 AIR QUALITY PROGRAM

(1) The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with State of North Carolina and federal emission and performance laws and standards. Ambient Air Quality Standards set by the NC Division of Air Quality (NCDAQ) and the Environmental Protection Agency (EPA) shall be maintained for all construction operations and activities. The Contractor shall have sufficient functional equipment available to accomplish the task.

(2) Particulates: Dust particles, aerosols, and gaseous by-products and fumes from all construction activities and the processing and preparing of materials, such as from asphalt batch plants and abrasive blasting, shall be controlled at all times at the construction site.

(3) Open Burning: The burning of man-made debris is prohibited on base. The burning of vegetation onsite is permitted under certain conditions and must be approved by the DPW-ECB, Air Quality Program Manager (910-432-8464). If burning of vegetation onsite is permitted the Contractor is required to notify the Forestry Branch daily at (910-396-2510) so they can assess any impacts on aviation and training.

Will the project require open burning? _____
Yes No

(4) Painting: The Contractor can perform small, maintenance-type painting (brushes, spray cans). Large scale and routine painting in a booth, with spray guns, ventilation, filters, etc., must be reviewed by DPW-ECB for permit applicability.

Will the project involve any painting? _____
Yes No

(5) Odors: Odors shall be controlled at all times from all construction activities, processing, and preparation of materials.

(6) Any work to be performed on Freon containing equipment (either new or existing equipment) shall be performed by EPA certified technicians using certified equipment. All excess Class I ozone depleting substances and R-22 type Freon being removed from equipment associated with chiller retrofits shall remain the property of the US Army, and must be shipped to the ODS Reserve in Richmond, Virginia. Call the Air Quality Program Manager (AQPM) for assistance. Any Freon removed or added must be reported to the AQPM for compliance with EPA Title VI.

Will the project remove or add any refrigerants? _____

Yes No

(7) Air Permits: Any new construction project which involves the installation of parts degreasers, paint booths, abrasive bead blasters, wood cyclones, boilers, back-up electrical generators or other fossil fuel fired combustion like equipment must be coordinated through the DPW-ECB, Air Quality Program Manager and the COE Environmental Office. Any construction project which involves the construction or modification of parking facilities which may result in an ambient air quality standard for carbon monoxide being exceeded must be coordinated through the DPW-ECB, Air Quality Program Manager and the COE Environmental Office. Air permits may be required for these activities. The DPW-ECB, Air Quality Program Manager will assist the COE Environmental Office and Contractor in making a determination if the construction project requires an air permit. Air permits must be obtained prior to the start of construction through DPW-ECB.

Will the project install, repair, or upgrade any fossil fuel fired equipment?

Yes No

If yes, please provide a list of equipment below with locations.

Will the project construct or modify a parking facility? _____

Yes No

If yes, please provide the parking capacity and/or potential open parking area of the facility. Also, please identify if an existing parking facility is located adjacent (within 100 meters in a suburban or rural area or 50 meters in an urban area and if there are no existing physical barriers) to the proposed construction project.

2.2 HAZARDOUS WASTE/MATERIALS

(1) The Contractor is responsible for the proper use, storage, and disposal of petroleum products, hazardous materials, (HM), and hazardous wastes (HW) according to all Federal, state, and local regulations (including, but not limited to, 49 CFR, 40 CFR, OSHA 1910.120, and Fort Bragg Regulations 200-1, 200-2, and 200-3). Petroleum products, hazardous materials, Contractor

generated hazardous wastes shall be managed, stored, and dispensed ensuring no spillage to the ground or water. Liquid hazardous materials and hazardous waste require secondary containment (40 CFR 112) that is capable of holding 110% of the volume of the largest container, or 10% of the total volume for the consolidated location, whichever is greater.

(2) The Contractor must provide for the proper storage of HM and HW and to take all the necessary provisions to meet the National Fire Protection Association codes, the Occupational Safety and Health Act and the Resource Conservation and Recovery Act laws and regulations.

(3) The Contractor is responsible for the transport of Contractor generated hazardous waste off Government property to a permitted transportation, storage and disposal facility (TSDF). Removal shall be performed by a licensed hazardous waste hauler. The Contractor is responsible for coordinating with the DPW Environmental Compliance Branch Hazardous Waste Program Manager (910-396-2295) to obtain the EPA ID number for the standard manifest. Hazardous waste cannot leave the installation without the designated representative from the DPW Environmental Office signing and obtaining a copy of the manifest.

(4) Spills of hazardous or toxic materials shall be immediately reported to the installation Fire Department by dialing 911, the DPW-ECB (910-396-2295) and the COE Environmental Office. The Person(s) discovering the emergency will take all steps possible to immediately alert others in the area, shut down all fuel operations (if appropriate), and safely initiate steps to control the emergency and reduce the hazard. The Contractor is responsible for cleanup and disposal and all associated costs due to Contractor generated spills.

(5) The Contractor shall ensure that all of his employees who handle hazardous waste are trained in the management requirements for hazardous waste.

Please provide a list of Hazardous Materials to be used on the project and attach the Material Safety Data Sheets (MSDSs). Please explain how you, the Contractor, will address spills of oil or hazardous materials.

Hazardous Material	Quantity (lbs)	Storage Type

2.3 SOLID WASTE PROGRAM

(1) Solid waste resulting solely from construction, remodeling, repair, or demolition operations on pavement, buildings, or other structures on Fort Bragg can be disposed in the Construction and Demolition (C&D) landfill at the Lamont Road Landfill Facility. Some examples of acceptable solid waste are plywood, fixtures, electrical materials, doors, painted wood, non-recyclable concrete, windows, drywall, shingles, vinyl siding, plumbing materials and treated wood.

(2) All Contractors are required to complete Solid Waste Training for Landfill Users and a Landfill Usage Permit Application. The completed Landfill Usage Permit Application form and training Certificate of Completion should be taken to the DPW-ECB and a copy furnished to the COE Environmental Office. Upon approval by the Solid Waste Manager a Landfill Usage Code will be issued. Contractor's EPP must also be approved before a Landfill Usage Code is issued.

Complete the Information Below (Attach additional information if necessary):

1. Name of individuals on the Contractor's staff responsible for waste prevention and management. _____

2. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.

3. Description of the regular meetings to be held to address waste management.

4. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of wastes.

5. Characterization, including estimated types and quantities, of the wastes to be generated. _____

6. Name of the landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.

7. Identification of local and regional reuse program, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity. Include the name, location, and phone number for each reuse facility to be used, and provide a copy of the permit or license for each facility.

8. List of specific waste materials that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Recycling facilities that will be used shall be identified by name, location, and phone number, including a copy of the permit or license for each facility.

9. Identification of materials that cannot be recycled/reused with an explanation or justification, to be approved by the Contracting Officer.

10. Description of the means by which any waste materials identified in item (8) above will be protected from contamination.

11. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers or whether mixed materials will be collected by a waste hauler and removed from the site).

12. Anticipated net cost savings by recycling/reusing as determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

13. Does the project require disposal of liquid materials? _____
Yes No

14. Does the project require disposal of soil? _____
Yes No

15. Estimated waste to be generated (i.e, sludge, liquids, soil, debris in tons). Metric Tons of each type.

Type	(Tons)

(3) Contractors are not allowed to dispose of liquid waste or sludge, medical waste, military equipment (Components from military vehicles, field equipment, tarps, canopies, or camouflage nets, military communication equipment or any unidentified item that could be munitions or components of munitions), white goods or tires at the C & D Landfill. If any of these items are found during the course of contract work immediately contact the DPW-ECB Solid Waste Program Manager (910-396-3372). Any of these items generated as part of contract work must be disposed of in accordance with contract specifications.

(4) The Contractor shall implement a recycling program (with an emphasis on recycling at the construction site) that includes separate collection of waste and recyclable materials. Based upon contract plans and drawings, the Contractor shall estimate the quantities of available materials for recycling. Contractors are encouraged to segregate recyclable materials at the point of generation. These recyclables can be taken to the recyclable collection containers at the Lamont Road Landfill Facility or to the Fort Bragg Recycling Facility. Collection areas are available for concrete (includes bricks and asphalt), cardboard, scrap metals, aluminum, pallets (wood and metal), and yard debris (generated from land clearing or yard maintenance activities). If contract specification allow, Contractors can take recyclable materials from construction projects to off-post recycling centers. However, the quantities of any materials recycled off-post must be reported to DPW-ECB for inclusion in required reports and SWARweb. Contractor shall coordinate his recycling efforts with the DPW-ECB Solid Waste Program Manager.

Please provide a list of estimated quantities of material to be recycled.

Item	Quantity (lbs)

(5) Contractor is responsible for arranging collection by or delivery of recyclable materials. Prior to delivering materials, Contractor shall be familiar with the specifications for acceptance of

construction and demolition materials at the recycling facilities including separation of recyclable material by type. Contractor shall provide recycled materials data in pounds to DPW-ECB throughout the length of the contract.

(6) The Contractor is subject to random inspections by landfill personnel. The Contractor will be responsible for removing any unacceptable waste identified during these inspections. Negligent use of the landfill facility or failure to follow permit requirements will result in suspension and/or loss of landfill usage privileges.

(7) Prime Contractors are responsible for ensuring that all subcontractors are properly trained regarding landfill usage requirements. Any abuse or negligence by a sub Contractor will be directed to the Prime Contractor. Prime Contractors may be required to pay the cost of cleanup and proper disposal of prohibited or misplaced items. Contractors are reminded that NC Solid Waste Management Rules and Regulations prohibit the disposal of aluminum cans.

The following Hazardous and Regulated Waste items are prohibited for disposal at the C& D Landfill:

- Batteries (other than alkaline)
- Paints
- Fuel filters
- Adhesives
- Fluorescent Lamps
- Petroleum products (including fuel)
- Solvents
- Oil filters
- PCB Ballads

These types of materials are classified as Hazardous and Regulated Waste and must be disposed of IAW Section 2.3 of this EPP.

2.4 ASBESTOS AND LEAD BASED PAINT PROGRAM

Asbestos Containing Material (ACM): The Contractor shall ensure that all areas requiring demolition or renovation have been inspected for asbestos prior to work beginning. Should asbestos be present, all personnel participating in asbestos activities shall be accredited IAW all federal, state and Fort Bragg regulations. Obtaining an asbestos removal permit is the responsibility of the Contractor. A copy of all permits and disposal documentation will be provided to the COE Environmental Office and the DPW-ECB, Asbestos Program Manager (910-432-3564). Asbestos bags will be clearly marked with the generator labels. The Contractor must dispose of all asbestos materials generated on-post at Lamont Road Landfill, provided the contract allows the use of the Government Landfill and each vehicle has a current Landfill usage code. The Contractor must review Fort Bragg landfill procedures and fill out and submit Fort Bragg Asbestos Removal, Transportation, and Disposal Documentation Form for each load disposed of at the landfill. The Contractor shall call the landfill 24 hours in advance at 910-396-6873 for disposal of all ACM. All ACM must be at the landfill before 1300 – loads arriving after this time will be rescheduled.

Was the Contractor provided results of the survey?
Yes No N/A

Will the project recycle painted concrete? _____
 Yes **No** **N/A**

2.5 TANKS/IRP/OWS PROGRAM

Will the project require removal of a UST or AST? _____
Yes No

If yes, provide location of the UST or AST.

Note: No USTs shall be installed on Fort Bragg.

(1) Contractors on Fort Bragg involved with projects requiring demolition, alteration, installation or removal of UST systems must follow the following procedures:

A. If the UST is removed and the surrounding soil shows no signs of contamination then the excavation can be backfilled with local soils and the condition of the soil and tank (and contents) be noted on a UST-3 form for that tank or site. The UST-3 form and a site sketch will be provided to the COE Environmental Office and the DPW-ECB Storage Tank Program Manager (910-396-7432).

B. If the UST is removed and the surrounding soil does show signs of contamination or a prior release, the Compliance Cleanup Program Manager (910-396-7432) should be contacted and the contaminated soil removed. If a minimal amount of soil (about 2 cubic yards) can be removed, leaving no further evidence of contamination, then the area can be backfilled with clean soil. The excavated soil will be properly disposed of at an NC-accredited contaminated soil disposal facility. The UST removed must be properly disposed.

C. Site condition and actions should be noted on the UST-3 form for that tank or site along with a site sketch. If excavation of soil beyond a reasonable amount cannot remove the contamination, then a soils sample will be taken and analyzed for Total Petroleum Hydrocarbons (TPH). The remaining in-place contaminated soil will be covered with backfill, GPS coordinates will be taken of the tank location, and the excavated soil will be disposed of properly at an NC-accredited contaminated soil disposal facility. Upon receipt of analytical results the Contractor will provide them to DPW-ECB along with the UST-3 form, site sketch, and waste manifest(s).

D. If a UST is punctured during construction or site grading, and a release occurs the Contractor will be responsible for complete cleanup of the site, including soil investigation and analysis. The Contractor will contact Fort Bragg Emergency Services (910-432-0911) and inform them of the release. They will immediately visit the site to ensure no fire hazards or other risks to human health and safety are present. The Contractor will contact Fort Bragg Hazardous Waste Team (910-396-2141). The Fort Bragg Hazardous Waste Team will visit the site to direct the spill response action. The Contractor will provide the spill response personnel and equipment.

E. The Contractor will contact the Compliance Cleanup Manager (910-396-7432) and inform him of the release. The release should be reported to the State of NC within 24 hours of the

release. The Compliance Cleanup Manager will report the release to the State. The Contractor will not make contact with the State.

F. For more information on UST discovery, removal and releases, refer to Fort Bragg's Heating Oil Discovery SOP #6002.

2) Aboveground Storage Tanks: If the project will install aboveground storage tanks (ASTs), either temporarily or permanently as part of the project, the ASTs will be of double-wall construction, with the capability to monitor and drain the annular space. The AST will be equipped with primary and emergency vents, a method to gauge the level of contents (such as a Clock Gauge), a spill bucket at the fill port, and an audible overfill alarm. Permanent AST installations will be placed on a concrete pad (to prevent settling), and all ASTs will be of the type that allow for the inspection of the bottom of the tank (as well as of the sides). Coordinate with DPW-ECB storage tank manager for approval on the correct AST to be installed.

Will the project repair, upgrade, or remove an OWS, washrack, grease rack, and/or grit chamber? _____

Yes

No

If yes, provide location of the OWS, washrack, grease rack, and/or grit chamber to be removed.

(2) Contractors on Fort Bragg involved with projects requiring demolition, alteration, or removal of Oil/Water Separators (OWS), wash racks, grease racks, and/or grit chambers must follow the following procedures:

A. Prior to removal operations, the contractor shall coordinate with the Fort Bragg Storage Tank/IRP/Program Manager (910-396-7432), to coordinate the excavation and removal of contents of the oil/water separator. Do not remove the oil/water separator until cleaning of the unit is complete. The oil/water separator may contain water, which is the responsibility of the Contractor to remove. All oil/water separator contents, rinsate, and rinse water shall be disposed in accordance with Code of Federal Regulations, off Fort Bragg by the Contractor. The Contractor will monitor the atmosphere for combustible gases inside the oil/water separator before removing the unit from the ground. If combustible gas monitoring indicates a flammable atmosphere (>10% of LEL), the Contractor will purge the oil/water separator atmosphere with fresh ambient air to reduce flammable vapor concentrations.

B. The Contractor shall obtain any permit requirements (i.e., digging permits, or Landfill permit) for the oil/water separator excavation.

C. Associated piping for the system shall be located, cut off, grouted at the ends, and abandoned in place by the Contractor. The Contractor will transport the oil/water separator to an off-site facility for disposal.

D. The Contractor shall excavate soil from over and around the oil/water separator and associated piping to the extent needed to remove the unit from the ground. Over-excavation of soil will be conducted by the Contractor if evidence of possible contamination is observed. Over-excavation shall not exceed 5 feet from each side of the oil/water separator. If the excavation compromises any nearby structures, the Contractor shall cease operation until given direction to proceed from the Contracting Officer's Representative (COR). After the oil/water separator is removed from the ground, the Contractor along with the ECB/US Army Corps of Engineers (USACE) representative will inspect the excavation.

E. The Contractor must place orange plastic snow fencing around the excavation if it is anticipated that the excavation will remain open for an extended period of time. The Contractor will attempt to avoid leaving open excavations or hazardous conditions overnight and shall grade the perimeter of the excavation to direct surface water runoff from the excavation.

F. Soil identified on the perimeter of the excavation that has visible staining, having strong petroleum or chemical odor will be identified and brought to the COR and ECB. Soil with suspected petroleum contamination will be screened with a photo-ionization detector (PID). If there is a PID reading of 10 ppm or greater the soil will be considered contaminated and segregated into a separate stockpile. All excavated soil will be stockpiled on an impervious surface. Cover of the excavated soil should be provided by the Contractor. Potentially contaminated soil will be transported to Fort Bragg's on-site disposal facility, behind the ECB office. Soil with PID concentration levels not exceeding the action level will be placed into clean stockpile for later use as backfill.

G. All samples shall be collected and handled in accordance with all applicable, USACE, federal, state, and local regulations and guidelines. A minimum of three soil samples will be collected at the bottom of the excavation; one from each end and one more from the deepest location. Depending on the size of the excavation, more than three samples may be required to characterize site conditions after removal. If an oil/water separator and a grease rack are being removed, a minimum of six soil samples must be taken as part of the project. In addition one composite soil sample will be collected from the "CLEAN" soil stockpile. The composite will be randomly collected from 3 locations in the stockpile. Sample material will be collected from the top, middle, and bottom of the soil pile at each of the three locations. Collected soil samples should be analyzed for RCRA Metals, VOCs, SVOCs, and MADEP EPH and VPH. The Contractor will ensure that current sample collection protocols are followed with an appropriate chain-of-custody report.

H. The Contractor will document the following in the field notes: location, matrix analysis, any strong petroleum or chemical odor, visible staining, a high organic vapor reading, sheen appearing on water (if present), or other relevant field conditions. All samples should be clearly identified and their location documented in a Closure Report. All the information requested above shall be tabulated on a spreadsheet with the printed name and signature of authorized Contractor's official. At the conclusion of the project the records will be furnished to the Government.

2.6 PEST CONTROL MANAGEMENT PROGRAM

(2) Licensing and Certification: All pesticide applications shall be performed by a Contractor certified in the EPA category or categories that cover the work to be performed and shall hold a valid business license. For work on Fort Bragg, the Contractor shall be certified and licensed by the State of North Carolina. The Contractor shall present evidence of such licensing and certification to the DPW-ECB, Installation Pest Control Coordinator (910-907-2160) for approval prior to beginning work under this contract.

If so please provide a list of pesticides and drawing showing the areas where pesticides will be applied.

2.7 WATER PROGRAM

(2) Drilling of potable or non-potable wells are not allowed on the installation.

(3) Septic tanks will be considered only in areas that do not have access to sanitary sewer lines. All new septic tank permits will be coordinated through the DPW ECB Water Quality Program Manager (910-432-8470). Any existing well or septic tank that is deemed no longer necessary will be abandoned in accordance with 15A NCAC 18A.1961. The Contractor must notify the DPW ECB Water Quality Program Manager of abandonment.

(4) Cofferdam and Diversion Operations: The Contractor shall plan his operations and perform all work necessary to minimize adverse impact or violation of the water quality standard for receiving streams (e.g., Tank Creek). Construction operations for de-watering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit the impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

(5) Stream crossings shall be controlled during construction. Crossings shall provide movement of materials and equipment, which do not violate water pollution control standards of Federal, State, or local agencies.

(6) Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. The Contractor shall monitor all water areas affected by construction activities.

2.8.2 Protection of Wildlife, Fish, Sensitive Plants and Habitat

(1) The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and damage of wildlife, fish, sensitive plants and habitat. In addition, the Endangered Species Act requires that federally-listed species and their habitats be protected; similar state acts require conservation and protection of state-listed species; and Army Regulation 200-1 requires conservation and protection of certain species and habitats.

(2) Various haul routes and roads on Fort Bragg are adjacent to rare, threatened, or endangered plant and animal species as well as other sensitive habitats. The red-cockaded woodpecker (RCW) (*Picoides borealis*) is an endangered bird that is often of concern to construction activities. Other protected plant and animal sites may be located near Contractor-used roads. The Contractor should be aware of posted signs denoting protected sites as well as trees with painted with white bands. Parking, digging, storage of construction materials and other habitat impacts are not permitted in protected areas. Harassing a protected species or damaging their habitat is a violation of law or regulation. For more information about the protection of natural resources on Fort Bragg, contact the Fort Bragg Environmental Management Branch (910-396-2867 or 910-432-4505).

2.9 LAND RESOURCES

2.9.1 Protection of Land Resources

(1) Prior to construction, the Contractor is responsible for clearly marking the areas required to accomplish all work to be performed under this contract. The Contractor is required to develop a Tree Removal and Restoration Plan. Tree Removal Plans shall contain a preexisting tree survey (drawing) that clearly depicts removed and retained trees; a table containing type tree, size range (diameter at breast height (dbh)) and number of trees to be removed and a functional replacement value for each size range. **The functional replacement value should be outlined by the Fort**

Bragg Tree Replacement Policy, located as Attachment 2 of the EPP. The Tree Removal and Restoration Plan should be submitted to the designated Project Manager, the COE Environmental Office and DPW-ECB.

Will the project require removal of trees? _____
Yes No

If yes, please attach a Tree Removal & Restoration Plan.

For projects under one acre, the tree survey will document tree size (by dbh), species, and location on the pre-existing tree survey drawing. For projects >1 acre tree functional replacement value will be determined at a ratio of 1:1.

Restoration plans must attempt functional replacement value by replanting trees on-site, if not applicable, off-site replacement will occur or a combination of both on-site and off-site may apply.

The Tree Removal and Restoration Plan will be forwarded to the Forestry Branch by the Project Manager. The Forestry Branch will review the plan and conduct a site visit to determine if merchantable tree sales are required and arrange appropriate disposal of said timber. It is imperative that project work area is clearly marked. Merchantable timber sales do not include stump removal. If merchantable tree sales are not required, tree and land clearing debris shall be stockpiled at the designated recycling area at the Fort Bragg Lamont Road Landfill Facility IAW Section 2.6 of this EPP. Tree and land clearing debris shall be free of as much dirt as possible. Trees and limbs should be cut to manageable size, 4 to 6 feet length. Note: if the tree has a large diameter (example – 3 feet Dia.) it should be cut to lengths of 3 feet or less. The tree should be cut close to the stump for safe handling at the landfill facility.

(2) Isolated areas within the general work area, which are to be saved and protected, shall also be clearly marked and/or fenced. The Contractor shall provide effective protection for land and vegetation resources at all times. The Contractor shall not remove, cut, deface, injure, or destroy land resources, including trees, shrubs, vines, grasses, topsoil, except as indicated on the drawings or in the specifications without written permission from the DPW-ECB. The document giving permission shall be provided to the COE Environmental Office by the contractor. No ropes, cables, or guy wires shall be fastened or attached to any trees for anchorage unless specifically authorized by the CO. Protect the root zone of adjacent trees and shrubs by using protective orange fencing or similar protection to mark the outside of the drip line of protected trees/shrubs. Tree trunks, roots and vegetation outside the designated area shall not be impacted by construction, including piling supplies against trees, scraping trunks of trees, grading next to tree trunks, or parking vehicles within the root zone. Monuments and markers shall be protected before construction operations begin. Where construction operations are to be conducted during darkness, the markers shall be made of appropriate reflective material to remain visible. The Contractor shall inform his personnel of the purpose of marking and/or protection of all

(3) The Contractor is responsible for developing a sustainable landscape plan in accordance with the Fort Bragg Installation Design Guide (FBIDG). In order to restore or maintain the integrity of the natural longleaf pine ecosystems, more than 50 percent of all canopy trees included on all landscape plans on Fort Bragg will be Longleaf Pine (*Pinus palustris*). The Contractor shall not specify invasive or exotic plant materials in the Landscape Plan. The Contractor will plant native trees, shrubs and grasses in accordance with the FBIDG Practical Plantings list.

Will the project require landscaping? _____

Yes No

2.10 CULTURAL RESOURCES PROGRAM

- Surface or subsurface artifacts (“relics”): stone tools and tool fragments (“arrowheads,” spear points), stone tool-making debris (flakes), pottery fragments, glass bottles, civil war material, iron agricultural implements or tools, etc.
- Surface or subsurface structural remains or features: architectural ruins (brickwork, stonework), fire pits, trash pits, wells, graves, etc.

(2) **Cultural Resources Protected by Law:** Cultural resources, including archaeological resources and historic properties, on federal property are protected by the Archaeological Resources Protection Act of 1979, As Amended (ARPA), other applicable laws (e.g., Antiquities Act of 1906, National Historic Preservation Act of 1966, As Amended) and Army regulations (AR200-1). The damage or destruction of archaeological sites as well as the collection of archaeological artifacts or other cultural resources on Fort Bragg or Camp Mackall for personal use is not authorized. Violations could subject the Contractor or Contractor personnel to civil and criminal penalties.

(3) **Historic Properties Protected by Law:** In accordance with the National Historic Preservation Act of 1966 as codified in 36CFR800 and AR200-1, the Army must consider the impact of its actions to historic buildings, structures, objects, and districts. All projects impacting historic buildings, structures, objects, and districts will be reviewed by the Cultural Resources Management Program for compliance with 36CFR800 and AR200-1 prior to construction. Any post-award changes that have the potential to impact historic buildings, structures, objects, and districts must be reviewed and approved by the Fort Bragg Cultural Resources Management Program prior to execution. Projects within the Old Post Historic District that do not meet the Old Post Historic District Design Guidelines will be determined an adverse effect and consultation with the North Carolina State Historic Preservation Office (SHPO) will be initiated to minimize or mitigate the adverse effect. All work must stop until the adverse effect has been resolved. Coordinate all projects that involve historic buildings, structures, objects, and districts with the Fort Bragg CRMP (910-396-6680).

Will the project be located inside the Bragg Historic District? _____
Yes No

2.11 WATER MANAGEMENT PROGRAM

Erosion/Sediment Control and Stormwater Management

(1) All land-disturbing activities on the installation require an Erosion and Sedimentation Control Plan (ESCP) and Stormwater Management Plan approved by the DPW/Water Management Branch (WMB) before the land disturbing activity can begin (DPW Erosion Control/Stormwater Policy). When the total area of land to be disturbed is 1 acre or more, and the plan has been approved by the COE Resident Engineer and the DPW-WMB, the ESCP must be submitted to and approved by the Division of Land Resources of the North Carolina Department of Environment and Natural Resources (NCDENR). The approval of the ESCP serves as the Notice of Intent for coverage under the NPDES General Permit NCG010000. Approval of the ESCP by NCDENR must be obtained prior to the commencement of construction and land-disturbing activities. The Contractor must comply with the conditions of the permit issued by the NCDENR IAW North Carolina Administrative Code, Title 15, Department of Environment and Natural Resources, Chapter 4, Sedimentation Control. The Contractor shall be responsible for taking all actions necessary to comply with the erosion and sedimentation control laws and implementing the permit.

Has the DPW/WMB approved the Erosion and Sediment Control and Stormwater Management Plan? _____
Yes No Under Review

Is the project area, including all areas of disturbance, greater than 1 acre?

Yes No

If yes, does the Contractor have an approved Erosion and Control Plan from NCDENR?

Yes

No

All projects with an approved Erosion Control Plan must have all Erosion and Sedimentation Control (E&SC) facilities inspected weekly and within 24 hours after any storm event greater than a half inch during a 24-hr period. All project associated storm water outfall(s) must be observed and recorded for the characteristics listed in the permit (NCG010000) issued by North Carolina Department of Natural and Environmental Resources Division of Water Quality. The Contractor must install and maintain an approved rain gage to record rainfall amounts and dates. Records of stormwater discharge, outfall, and stream inspections/observations associated with the construction project are to be maintained on the site until the project has been completed and closed-out by NCDENR. See Attachment 3 (Stormwater Inspections for General Permit Land Disturbing Activity) of the EPP.

(2) If the project is already covered by such Permits and Plans, the Contractor shall abide by such IAW Section 1.4 of this specification. The Contractor shall coordinate such applications, plans, and permits with the COE Environmental Office and the DPW-WMB.

(3) Temporary Protection of Disturbed Areas: Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation at all times including, but not limited to, the following:

(a) Control of Runoff: Storm water runoff from construction sites shall be controlled by construction of silt fences, diversion ditches and silt basins; by check dams and berms constructed to reduce the velocity and divert runoff to protected drainage courses; installation of drop/curb inlet protections; and by any measures required by the State-approved Erosion and Sedimentation Control Plan (ESCP).

(b) Ground cover must be reestablished early in the project rather than being reserved as the last item of work. The Division of Land Resources requires that disturbed area be seeded or ground cover provided within 21 days of any phase of grading. Final retainage will not be released until 100% of the final ground cover is established by the Contractor. All disturbed areas will follow the Fort Bragg seeding specifications as found in the Fort Bragg Installation Design Guide (FBIDG), unless specifically reviewed and approved by the DPW/WMB.

(c) Reduction of Exposure of Unprotected Erodible Soils: Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure to unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries, and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas.

(4) All borrow, spoil, utility easements, haul/access roads, staging/laydown, and any other associated areas necessary to execute the plan and/or complete the project are to be included within the planned limits of disturbance. The ESCP must include these areas for erosion prevention, sedimentation control, and site reclamation.

PART 3 - EXECUTION

3.1 SUBMITTALS

The Environmental Protection Plan (EPP) must be submitted to the COE Environmental Office within ten (10) days after the date of Notice of Award. For Design-Build Projects, the EPP must be submitted at the 50% (unless stated otherwise in contract documents) design review and continue through approval at the 100% design review. The EPP must be approved by the COE Environmental Office and DPW-ECB prior to starting construction. Contractors will not be provided Landfill access until they have an approved EPP.

3.2. ENVIRONMENTAL MONITORING

The Contractor shall monitor for environmental compliance at the job site, including land, wildlife, habitat, water, air, hazardous and toxic wastes, hazardous materials and solid waste disposal. Also, the Contractor shall keep construction activities under surveillance and control to minimize disturbances caused by excessive noise.

The Contractor has designated _____ to ensure the EPP is implemented. This person(s) has the authority to act for the Contractor in all environmental protection matters.

3.3 IMPLEMENTATION

DPW-ECB will review the EPP and provide comments to the Contractor, via the CO, within one week of receiving the EPP. The EPP must be approved before the Landfill Usage Code is issued to the Contractor. Approval of the Contractor's plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures IAW local, state and federal laws and regulations and Army policy.

3.4 NOTIFICATION

The DPW-ECB Compliance Officer will notify the COE Environmental Office of any observed noncompliance with federal, state or local laws or regulations, permits, and other elements of the Contractor's EPP. This verbal notification shall be followed by a written notification of noncompliance. The Contractor shall, within 24 hours of receipt of written notice, provide written proposed corrective action to the Compliance Officer and complete corrective actions as

approved within 48 hours of said approval. If the Contractor fails to immediately correct the noncompliance problem, the Compliance Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No contract period extensions or cost/damage recuperation shall be granted to the Contractor for any such suspension.

3.5 POST-CONSTRUCTION CLEANUP

The Contractor shall be responsible for cleaning up all areas affected by the construction and restoring the area to at least its original condition to include landscaping; planting of trees, sod, and shrubs damaged by construction; and raking and disposal of debris such as roofing shingles, paper, nails, glass, sheet metal, bricks, and waste concrete. Backfilled areas shall be machine-compacted and replanted with the approved grass mix for that season (see Attachment 4). Construction debris shall be removed and properly disposed. Culverts and drainage ditches with sediment from the construction area shall be cleared routinely to maintain proper drainage and re-cleaned prior to completion of the contract.

3.6 RESTORATION OF DAMAGED LANDSCAPE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. This work will be accomplished at the Contractor's expense and IAW the Installation Design Guide. Only approved species can be planted.

3.7 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and portable pollution control devices for the duration of the contract for the length of time construction activities produce the particular pollutant.

A. Containment Berms: The Contractor shall provide a secondary containment berm around temporary above ground fuel storage tanks. The bermed area shall be large enough to contain 125 percent of the volume of the storage tanks. The Contractor shall ensure containment areas are kept free of rainwater or any other substance that will reduce its containment capacity throughout the duration of the contract. The Contractor shall not install any temporary underground storage tanks.

B. Erosion and Sedimentation Control Devices: The Contractor shall immediately repair any damaged erosion and sedimentation control structures, such as silt fences, and remove accumulated sediment.

C. Storm Drains: The Contractor shall ensure sediment does not block storm drains. The Contractor shall be responsible for cleaning storm drains blocked due to erosion or sediment from the work area or from offsite sources during the duration of the contract.

3.8 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

A. The Contractor shall train his/her personnel in all phases of environmental protection using the information provided in the Environmental Protection Plan. Such training shall be completed and documented in the EPP before contract work begins.

B. The Contractor is encouraged to complete a comprehensive site survey to develop a baseline of existing environmental conditions at the construction site as an integral part of the required pollution control training. Any concerns identified during the survey by the Contractor should be reported to the COE Environmental Office and DPW-ECB. This survey can also be used to guide the Contractor's staff in the manner and method of work to be used during the project. Training of Contractor personnel is required on the requirements of all environmental permits and programs including, but not limited to, the Environmental Monitoring Plan; Oil and Hazardous Materials Spill Prevention and Contingency Plan; Storm Water Pollution Prevention Plan; Recycling and Pollution Prevention goals; Management of Hazardous and Non-hazardous Materials and Waste; Protection of Wildlife, Fish, Habitat, Sensitive Plants; Air Resources; Asbestos Containing Materials; Lead Based Paint; Ozone Depleting Substances; Cleanup and Restoration.

Attachment 1**Environmental Points of Contacts (area code 910)**

Environmental Compliance Branch	DPW-ECB	907-3214
Environmental Management Branch	DPW-EMB	396-6518
Air Quality Manager	DPW-ECB	432-8464
Solid Waste and Recycling	DPW-ECB	396-3372
Asbestos/ Lead-Based Paint Program Manager	DPW-ECB	432-3564
Installation Pest Control Coordinator	DPW-ECB	907-2160
Hazardous Waste Program Manager	DPW-ECB	396-2295
IRP/OWS/ Program Manager	DPW-ECB	396-7432
Compliance Cleanup Program Manager	DPW-ECB	396-7432
Endangered Species Branch	DPW-EMB	396-2544
Cultural Resources	DPW-EMB	396-6680
Water Management Branch	DPW-EMB	396-2301
COE Environmental Office	Barbara Bass	396-1211ext233 624-9118 cell
COE Environmental Office	Michael Gilbert	396-1211ext230 308-2501 cell
FORT BRAGG EMERGENCY SERVICES		432-0911 (cell phone) Or 911 (base phone)

Attachment 2



REPLY TO
ATTENTION OF
IMSE-BRG-PWE

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FT BRAGG
2175 REILLY ROAD, STOP A
FORT BRAGG, NORTH CAROLINA 28310-5000

7 Jul 09

MEMORANDUM FOR Whom It May Concern

SUBJECT: Tree Replacement/Replanting Values on Fort Bragg

1. In an effort to maintain the *Pinus palustris* (longleaf pine) ecosystem and Red-Cockaded Woodpecker (RCW) habitat on the installation as required by the US Fish and Wildlife Service, the following number of longleaf pine must be replanted when a pine of the denoted size is removed for areas less than one acre. Size is indicated by diameter at breast height (DBH) in inches of the tree removed. For acreage of clear-cut greater than one acre, replace with an acre for acre value in *Pinus palustris* for any type pine removed and for all hardwoods removed, replant an oak/hickory mix at 1:1. These values are based on a 2001 study of the carbon sequestration potential of Southeastern pine forests by Dr. Richard Birdsey of the US Forestry Service.

a. Replacement value for Longleaf Pine (*Pinus palustris*) under 1 acre total: Outside of a managed forest partition (i.e., RCW habitat, Greenbelt Area)

4" -9.99" DBH = 2:1
10"- 13.99" DBH = 4:1
14" + DBH = 6:1
Old growth/flat top (identified by ID w/number) = 8:1

b. Inside of a managed forest partition (i.e., RCW habitat, Greenbelt Area)

4" -9.99" DBH = 4:1
10"- 13.99" DBH = 6:1
14" + DBH = 8:1
Old growth/flat top (identified by ID w/number) = 16:1

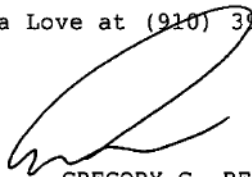
IMSE-BRG-PWE

SUBJECT: Tree Replacement/Replanting Values on Fort Bragg

c. Replacement value for hardwoods (all): 1:1

d. For tree removal in acreages greater than one acre,
replace with *Pinus palustris*, replanted acre for acre.

3. Point of contact is Julia Love at (910) 396-6386.

A handwritten signature in black ink, appearing to read 'G. Bean', is written over the printed name and title.

GREGORY G. BEAN
Director of Public Works

**INSPECTION RECORD
FOR ACTIVITIES UNDER STORMWATER GENENERAL PERMIT NCG010000 ***

(12/29/09)

PROJECT: _____ **MONITORING FOR THE WEEK BEGINNING:** _____

RAINFALL: A rain gauge shall be maintained onsite and a record of the daily rainfall amounts shall be kept.

Day or Date:							
Rainfall Amount (inches):							
Initials:							

ASSESSMENT OF CONTROL MEASURES: All control measures must be inspected at least once per seven calendar days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24 hour period.

Measure Identification (i.e., silt fence, sediment pond, sediment trap, ground cover)	Date of inspection	Initials of inspector	Operating Properly (Y/N)	Corrective Actions Taken	Date Corrective Action Taken

STORMWATER DISCHARGE OUTFALLS: All stormwater discharge outfalls must be inspected at least once per seven calendar days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24 hour period.

Stormwater Discharge Outfall Identification	Date of Inspection	Initials of Inspector	Is Erosion Seen Near Outfall? (Y/N)	Describe evidence of other pollutants discharging from the site such as oil sheen, discoloration, cement wastes, sanitary waste, fertilizers, or fuel or material storage leakage.

VISIBLE SEDIMENTATION AND/OR STREAM TURBIDITY: Record corrective actions taken in "ASSESSMENT OF CONTROL MEASURES" above.

- Is there any visible sediment deposited in a stream, wetland or buffer? Yes _____ No _____ Date(s) _____ DWQ contacted? _____
- Is there any visible sediment deposited on adjacent property(ies)? Yes _____ No _____ Date (s) _____
- Is there any visible decrease in stream clarity (increased turbidity-cloudy) because of a discharge? Yes _____ No _____ Date(s) _____

Has all land disturbing activity been completed? (Y/N) _____

Has the final permanent ground cover been completed & established? (Y/N) _____

By this signature, I certify, in accordance with Part II Sec. B(10) of the NCG010000 permit, that this report is accurate and complete to the best of my knowledge

Signature of Permittee or Designee: _____ Date: _____

Handout Specification for Small Projects
Erosion Control Requirements For All Projects

Regardless of the size of the area being disturbed, a plan is to be submitted to the DPW Water Management Branch for approval. The plan can be as simple as location, what is to be done, when the work will be performed, and erosion control measures that will be used--for example, silt fence, inlet protection, and seeding specification. If the area is greater than 1 acre a plan must be approved by the Water Management Branch prior to being submitted to NC DENR.

Fort Bragg seeding specification:

1. area will be tilled to 4" depth
2. apply lime at 70 pounds per 1000 square feet, or 1.5 tons per acre
3. apply 10-20-20 fertilizer at a rate of 850 pounds per acre or 20 pounds per 1000 square feet. The fertilizer should be either slow time release or applied in two applications, half at time of planting and the second half after permanent seed germinates.
4. The lime and fertilizer will be worked into the top 2 to 4 inches of soil prior to seeding.
5. Seed Mix and Rate:

Permanent Seeding

"Cool Season": planted between 1 September and February 28
50 pounds per acre Soft Red Winter Wheat (*Triticum spelta*). NO RYE GRASS.
25 pounds per acre common Bermuda (*Cynodon dactylon*), hulled
25 pounds per acre common Bermuda (*Cynodon dactylon*), unhulled

"Warm Season": planted between 1 March and 31 August
50 pounds per acre German (*Setaria italica*), Brown Top (*Setaria italica*), or Fox Tail Millet (*Brachiaria ramosum*)
50 pounds per acre common Bermuda (*Cynodon dactylon*), hulled

Temporary Seeding

"Cool Season": planted between 1 September and February 28
120 pounds per acre Soft Red Winter Wheat (*Triticum spelta*)

"Warm Season": planted between 1 March and 31 August
65 pounds per acre German (*Setaria italica*), Brown Top (*Setaria italica*), or Fox Tail Millet (*Brachiaria ramosum*)

Straw Mulch: 4,000 pounds per acre. The ground should be completely covered with no bare spot larger than a quarter, then tacked with emulsified asphalt. Emulsified asphalt shall be applied at a rate heavy enough that the entire area appears black in color.

Hydroseeding: Hydroseeding shall only be allowable on slopes steeper than 1 horizontal to 1 vertical. Steps 1 through 4 must be completed prior to hydroseeding. Hydroseeding should be applied in two applications. The first application will consist of 1/3 of the mulch and 2/3 of the seed and the second application will consist of 2/3 of the mulch and 1/3 of the seed. The mulch will include a tackifier and will be applied at a rate of 2,000 pounds per acre or the manufacturer's recommendation, whichever is higher.

6. Upon completion of the project, prior to leaving the site, the Water Management Branch shall be notified to inspect the project. POC Mr. Jack Wilson at 396-2301, extension 224.

If you have questions please contact Lee Ward or Craig Lantz, 396-2301, extension 226, Jennings.c.lantz@us.army.mil. We can address State, Federal, and Fort Bragg requirements in more detail. If you would like us to meet with you on site, or to give a presentation and answer questions regarding erosion and sediment control and storm water control, we will be happy to do so. Let us know what time would be convenient for you.